

WHAT IS CLAIMED IS:

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1. An image-capturing apparatus, comprising:
a first image-capturing unit having a first image-capturing optical system;
and
a second image-capturing unit having a second image-capturing optical system, the second image-capturing unit being detachably connected to the first image-capturing unit.
 2. The image-capturing apparatus as defined in claim 1, wherein the second image-capturing unit has a connecting part capable of detachably connecting to a third image-capturing unit having a third image-capturing optical system.
 3. The image-capturing apparatus as defined in claim 1, further comprising:
a connection detector for detecting that the first image-capturing unit is connected to at least the second image-capturing unit;
an information transmitter for transmitting information between the first image-capturing unit and at least the second image-capturing unit; and
a controller for synchronizing or interlocking image-capturing operation of the first image-capturing unit and at least the second image-capturing unit.
 4. The image-capturing apparatus as defined in claim 1, further comprising at least one of:
a lens interval changer for adjusting an interval between the first and second image-capturing optical systems; and
an optical axis angle changer for adjusting an angle of an optical axis of the second image-capturing optical system with respect to an optical axis of the first image-capturing optical system.

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5. The image-capturing apparatus as defined in claim 1, wherein each of the first and second image-capturing units has a power source.
6. The image-capturing apparatus as defined in claim 1, further comprising:
a power supplying device for supplying power from a power source of the first image-capturing unit to at least the second image-capturing unit.
7. The image-capturing apparatus as defined in claim 1, wherein the second image-capturing unit records an image at the same time as the first image-capturing unit does in synchronism with an image-recording start signal outputted from the first image-capturing unit.
8. The image-capturing apparatus as defined in claim 1, wherein an image capture timing of the second image-capturing unit is offset from a reference image capture timing of the first image-capturing unit by a predetermined time to thereby continuously capture images with the first and second image-capturing units.
9. The image-capturing apparatus as defined in claim 1, wherein the first image-capturing unit comprises at least one of:
an AE device for measuring an AE value for controlling automatic exposure;
an AWB device for measuring an AWB value for automatically controlling white balance; and
an AF device for measuring an AF value for automatically controlling a focal point;
wherein the first image-capturing unit automatically controls at least one of the exposure, the white balance and the focal point in accordance with said at

least one of the AE value, the AWB value and the AF value obtained by the first image-capturing unit.

10. The image-capturing apparatus as defined in claim 9, wherein the second image-capturing unit comprises at least one of:

an AE device for measuring an AE value for controlling automatic exposure;

an AWB device for measuring an AWB value for automatically controlling white balance; and

an AF device for measuring an AF value for automatically controlling a focal point;

wherein the first image-capturing unit and the second image-capturing unit share measuring operations and measured results.

11. The image-capturing apparatus as defined in claim 1, wherein:

each of the first and second image-capturing optical systems comprises a zoom lens; and

the image-capturing apparatus further comprises a lens controller for driving the zoom lenses of the first and second image-capturing optical systems to equalize zooming magnifications of the first and second image-capturing optical systems.

12. The image-capturing apparatus as defined in claim 1, wherein each of the first and second image-capturing optical systems comprises a non-contact communication device for transmitting information between the first image-capturing unit and the second image-capturing unit by using electromagnetic waves.

13. An electronic camera used as the first image-capturing unit in claim 1, the electronic camera comprising:

a connecting part to which the second image-capturing unit is connected; and

an information transmission part for transmitting data between the first image-capturing unit and the second image-capturing unit connected to the first image-capturing unit through the connecting part.

14. The electronic camera as defined in claim 13, wherein the information transmission part is capable of being used as a slot through which an external storage device is detachably attached to the electronic camera.

15. An image-capturing unit capable of being detachably attached to the electronic camera of claim 13, the image-capturing unit comprising:

an imaging part including an imaging device for converting a light from a subject into an electric signal, the imaging part being constructed in the same manner as the image-capturing optical system loaded in the electronic camera;

a joint capable of jointing with the connecting part of the electronic camera; and

a second information transmission part connectable with the information transmission part of the electronic camera.

16. The image-capturing unit of claim 15, further comprising:

a second connecting part to which a third image-capturing unit is connected; and

a third information transmission part for transmitting data between the second image-capturing unit and the third image-capturing unit connected to the second image-capturing unit through the second connecting part.

17. An electronic flash unit capable of being detachably attached to the electronic camera of claim 13, the electronic flash unit flashes in response to an image-recording start signal outputted from the first image-capturing unit.
18. The image-capturing apparatus as defined in claim 1, wherein each of the first and second image-capturing units comprises an imaging device for converting a light from a subject into an electric signal, and captures an image as an electronic image.
19. The image-capturing apparatus as defined in claim 18, further comprising:
an image position adjuster for adjusting a position of an image captured by the second image-capturing unit with respect to a position of an image captured by the first image-capturing unit.
20. The image-capturing apparatus as defined in claim 18, further comprising:
an image display; and
an adjusting device for displaying, on the image display, the image captured by the first image-capturing optical system and the image captured by the second image-capturing optical system to overlap one another, the adjusting device adjusting at least one of an image extracting position and an image extracting angle of the second image-capturing optical system.
21. The image-capturing apparatus as defined in claim 20, further comprising a storage device for storing an amount adjusted by the adjusting device.
22. The image-capturing apparatus as defined in claim 18, further

comprising:

an image display; and

an adjusting device for displaying, on the image display, the image captured by the first image-capturing optical system and the image captured by the second image-capturing optical system to overlap one another, the adjusting device adjusting a direction of an optical axis of the second image-capturing optical system.

23. The image-capturing apparatus as defined in claim 18, wherein the second image-capturing unit comprises a gain adjuster for adjusting a gain of a video signal to equalize a video signal level of the second image-capturing unit to a video signal level of the first image-capturing unit.

24. The image-capturing apparatus as defined in claim 18, further comprising:

an image display having a parallax barrier display layer on a display plane, the parallax barrier display layer displaying a parallax barrier having a pattern in which light transmissible parts and light shielding parts are arranged alternately; and

a signal processor for displaying, on the image display means, one of an image pattern in which strip-shaped image fragments representing a left-eye image and a right-eye image are arranged alternately, and an image pattern in which strip-shaped image fragments representing a plurality of images are arranged in order;

wherein one of an image capable of being seen three-dimensionally and an image capable of being seen differently according to viewing directions is displayed.

25. The image-capturing apparatus as defined in claim 18, wherein the first and second image-capturing units capture images at different focal positions, and focussed areas in the images are combined to compose an image that is focused over the whole image.

26. The image-capturing apparatus as defined in claim 18, wherein depth distribution information is extracted from the images captured by the first and second image-capturing units to perform special effects for areas that are not at a predetermined image-capturing distance.

27. The image-capturing apparatus as defined in claim 18, further comprising a shot number display for displaying a number of possible shots according to a number of connected image-capturing units.

28. The image-capturing apparatus as defined in claim 18, further comprising a file manager for recording a sequence of image data, captured by the first and second image-capturing units simultaneously or continuously, in an image file and automatically giving a file name to the image file, the file name being distinguishable from a file name of an image file in which one piece of image data is recorded.

29. The image-capturing apparatus as defined in claim 18, further comprising a file manager for recording a sequence of image data, captured by the first and second image-capturing units simultaneously or continuously, in separate image files and automatically giving file names to the separate image files, the file names indicating that the separate image files are related to one another.